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| **Food Manufacturing - Students learn about:** | **Students learn to:** |
| **Production and processing of food** • quality and quantity control in the selection of raw materials for food processing • role of food additives in the manufacturing process • characteristics of equipment used in different types of production and the factors influencing their selection • production systems used in the manufacture of food, eg small scale, large scale, manual, automated, computerised • quality management considerations in industrial practices to achieve safe foods for public consumption, eg hazard analysis and critical control point (HACCP); occupational health, safety and hygiene **Preservation** • reasons for preserving foods, eg safety, acceptability, nutritive value, availability and economic viability • causes of food deterioration and spoilage: – environmental factors (infestation, oxygen, light and water) – enzymatic activity – microbial contamination (mould, yeast and bacteria) • principles behind food preservation techniques,including temperature control and restriction of moisture, exclusion of air and pH • preservation processes, including canning, drying, pasteurising, freezing and fermenting **Packaging, storage and distribution** • functions of packaging and types of materials available • current developments in packaging, including active packaging; modified atmosphere packaging; sous vide • storage conditions and distribution systems at various stages of food manufacture | • describe processes that transform raw materials into manufactured food products • describe the processing techniques, equipment, storage and distribution systems used in industry and compare with those used domestically • identify critical control points and describe quality control procedures in food production systems • identify food safety hazards and risks • prepare food using the principles of food preservation to ensure a safe product • investigate, through experimentation, the suitability of packaging materials for different food products |